

Amendments to the Claims

Listing of claims:

1. (amended) An electromechanical functional module comprising:
at least one transducer having a first electrode and a second electrode;
at least one upper fiber cover layer, which is nonconducting and is positioned over the at least one transducer;
at least one lower fiber cover layer, which is nonconducting and is positioned below the at least one transducer;
at least one fiber interlayer, which is nonconducting with at least one cut-out for accommodating the at least one transducer;
at least one upper electric [contract] contact strip that is integrally connected to the at least one upper fiber cover layer and in contact with the first electrode of the at least one transducer; [and]
at least one lower electric [contract] contact strip that is integrally connected to the at least one lower fiber cover layer and in contact with the second electrode of the at least one transducer, wherein the at least one upper fiber cover layer, the at least one lower fiber cover layer and the at least one transducer are laminated together; and
wherein the at least one upper electric contact strip includes woven elastic and the at least one lower electric contact strip includes woven elastic.
2. (cancelled)
3. (amended) The electromechanical functional module according to claim 1, wherein the at least one upper electric [contract] contact strip that is integrally connected to the at least one upper fiber cover layer substantially covers the first electrode of the at least one transducer; and the at least one lower electric [contract] contact strip that is integrally connected to the at least one lower fiber cover layer substantially covers the second electrode of the at least one transducer.

4. (amended) The electromechanical functional module according to claim 1, wherein the at least one upper electric [contract] contact strip and the at least one lower electric [contract] contact strip includes carbon fibers.

5. (cancelled)

6. (amended) The electromechanical functional module according to claim 1, wherein the at least one upper electric [contract] contact strip and the at least one lower electric [contract] contact strip includes metal wires.

7. (cancelled)

8. (original) The electromechanical functional module according to claim 1, wherein the at least one upper fiber cover layer, the at least one lower fiber cover layer and the at least one fiber interlayer are laminated together to form a fiber composite.

9. (original) The electromechanical functional module according to claim 8, wherein the laminated fiber composite includes a resin.

10. (original) The electromechanical functional module according to claim 1, wherein the at least one transducer includes a piezoceramic.

11. (original) The electromechanical functional module according to claim 1, wherein the at least one transducer includes an electrostrictive.

12. (original) The electromechanical functional module according to claim 1, wherein the at least one upper fiber cover layer, the at least one lower fiber cover layer and the at least one fiber interlayer includes polyester felt.

Claims 13-20 (withdrawn)

21. (new) An electromechanical functional module comprising:
an nonconductive fiber interlayer having a cut-out therethrough;
a transducer located within the cut-out and positioned thereby;
upper and lower fiber cover layers respectively lying over and below the transducer and interlayer;
an upper electric contact strip of woven elastic laminated to the upper fiber cover layer, the upper electric contact strip in contact with and substantially overlying the transducer;
a lower electric contact strip of woven elastic laminated to the lower fiber cover layer, the lower electric contact strip in contact with and substantially underlying the transducer;
and
a resin injected into the combination of the transducer, the upper and lower fiber cover layers, and the fiber interlayer;
thereby forming the electromechanical functional module.

22. (new) An electromechanical functional module as set forth in claim 21, including a resin for laminating the upper and lower electric contact strips to their respective upper and lower fiber cover layers.

23. (new) An electromechanical functional module as set forth in claim 21, wherein the upper and lower electric contact strips include carbon fibers.

24. (new) An electromechanical functional module as set forth in claim 21, wherein the upper and lower electric contact strips include metal wires.

25. (new) An electromechanical functional module as set forth in claim 21, wherein the resin includes an epoxide resin with thermoplastic qualities.

26. (new) An electromechanical functional module as set forth in claim 21, wherein the resin is a resin matrix.

27. (new) An electromechanical functional module as set forth in claim 21, wherein the resin injected into the combination of the transducer, the upper and lower fiber cover layers, and the fiber interlayer is injected by applying a vacuum.

28. (new) An electromechanical functional module as set forth in claim 21, wherein the transducer is a piezoelectric element.

29. (new) An electromechanical functional module as set forth in claim 27, wherein the upper and lower fiber cover layers, and the fiber interlayer serve to encapsulate the piezoelectric element.

30. (new) An electromechanical functional module as set forth in claim 29, wherein the piezoelectric element is shaped to form a curved piezofilm.